

IN THE ABSTRACT OF THE DISCLOSURE:

Please amend the abstract as follows:

ABSTRACT OF THE DISCLOSURE

There is provided an ion trap mass spectrometer which can detect fragment ions having a low mass and enables high-sensitivity measurement. A mass spectrometer has an ion source generating sample ions; an ion trap having a pair of endcap electrodes 7a, 7b and a ring electrode 9 and accumulating and ejecting the ions; gas introduction means 44 ions generated by the ion source and isolating precursor ions from the accumulated ion and dissociating the isolated precursor ions and ejecting the dissociated ions from the ion trap. A gas introduction hole is arranged in the endcap electrode or the ring electrode for introducing a gas in intermittently-introduced bath gas therethrough into the ion trap at a predetermined timing; and a A detector detecting detects the ions ejected from the ion trap, wherein the The center axis of a the gas introduction hole is arranged so as to pass through a region Θ near the center of gravity of the ion trap.